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10/666,712	09/18/2003	Richard E. Gady	60,130-1890; 00MRA0574	9034
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CARLSON, GASKEY & OLDS, P.C. 400 WEST MAPLE ROAD SUITE 350 BIRMINGHAM, MI 48009			LUM VANNUCCI, LEE SIN YEE	
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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/666,712
Filing Date: September 18, 2003
Appellant(s): GADY ET AL.

Carlson, Gaskey & Olds
For Appellant

MAILED

OCT 20 2005

EXAMINER'S ANSWER

GROUP 3600

This is in response to the appeal brief filed 7/29/05 appealing from the Office action
mailed 12/6/04.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

None.

(2) Related Appeals and Interferences

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

None

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

(9) Grounds of Rejection

The following grounds of rejection are applicable to the appealed claims:

A. Rejection under 35 USC 112/1st paragraph

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 34 and 35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to

one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The Claims are unsupported in the Specification.

Claim 34 reads

"The method according to Claim 33 including driving the second differential with power from the power source only when wheel slippage is identified in at least one of the first and second sets of wheels."

Claim 35 reads

"The transfer case assembly according to Claim 15 wherein the second axle output shaft is only coupled to said first axle output shaft during a wheel slippage condition."

According to paragraph 22 of the Spec, the second output shaft is briefly coupled to the power source (after slippage is controlled) while the system determines when ground conditions have improved sufficiently. Thus, the subject matter of these Claims, respectively, are not provided in this language.

B. Rejection under 35 USC 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 15-23 and 25-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Yasuda et al 6115663.

Yasuda discloses a transfer case assembly comprising

Input shaft (unidentified, inherent) coupled to power source 4,

First output shaft 20 driven by the input shaft,

First drive axle 22 with differential 21, receiving input from the first output shaft,

Second output shaft (unidentified, inherent) selectively driven by the input shaft,

Second drive axle 34 with differential 33, receiving selective input from the second output shaft,

Clutch mechanism 31 coupling the output shafts,

Gear assembly 6 coupling the input shaft to the first output shaft for continuous driving engagement,

Controller 1 controlling activation of the clutch, wherein it

Compares rotational speeds of the output shafts (c2, ln 59-63),

Generates a signal to bring the speeds within a common range (c2, ln 60-63),

if the speeds differ from each other by a predetermined amount (c4, ln 20-23; threshold "S-TH"),

by controlling either power source output or braking force (c3, ln 28-33), prior to activation of the clutch, or

by controlling both power source output and braking force as disclosed in col 1, lines 14-20, with emphasis on lines 17-20; "reducing the output power of the engine along with operating the brake" (emphasis added),

Activates the clutch during a slip condition when the output shafts are within, or only within, the common range (c3, ln 49-52; first, traction control is activated, then torque-splitting), and,

Disengages the second output shaft from the first when there is no slippage (col 3, lines 7-10; "if the rear wheels are skidding (i.e., there is slipping), the controller...changes the...torque between the front and rear wheels (i.e., the clutch is activated to couple the shafts)" – *therefore, if there is no slip, the clutch is not activated*).

Yasuda further discloses a method for coupling a transfer case to the drive axle during wheel slippage, the steps derived from the structure and/or means provided above.

C. Rejection under 35 USC 103

2 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 24 is rejected under Yasuda.

As set forth above, Yasuda teaches substantially all that is claimed, but does not specifically disclose whether the gear assembly includes three gears. Admitted prior art (previously noted as Official Notice) - Leitner - shows a transfer case as commonly including three gears; see figure 1. It would have been obvious to use this configuration due to its commercial availability and known suitability for this purpose.

Therefore, Leitner teaches this well-known transfer case, and it is unnecessary to provide another reference.

(10) Response to Argument

A. Response to Argument re 112/1st Rejection

It is maintained that this rejection is proper because the Specification does not disclose the subject matter in Claims 34 and 35, as discussed above.

Here, Appellant (inadvertently) appears to agree with this interpretation on p16, middle paragraph:

“However, when the axle is engaged, it may be difficult to determine when ground conditions have improved sufficiently...[O]nce there clearly is no wheel slippage, the front axle is automatically disengaged.” (emphasis added)

The emphasized language clearly provides the second output shaft as coupled to the power source for a short period after slippage, thus not only during slippage.

Therefore, this rejection is proper, and maintained.

B. Response to Arguments re 102 Rejection

Examiner maintains the rejection under Yasuda.

Re Claims 15 and 26 ---

On the top of p9, Appellant provides a first reason why Yasuda fails to obviate the respective elements - “Appellant’s system is a mechanical system that requires a clutch to be shifted to actively engage the front drive axle. This does not occur in

Yasuda." However, Yasuda clearly discloses a (mechanical) clutch (31) that performs this function.

In the second complete paragraph of p9, Appellant argues "Appellant's system does not modulate a torque splitting device to proportion drive power." This statement is irrelevant because Yasuda is employed as comprising the respective elements, and is not presented as an identical system.

Appellant continues, in this paragraph, by arguing that "Yasuda does not disclose any type of controlled shifting for engagement of a front axle." This statement is unclear at least on two points. First, it is unclear what is meant by "controlled shifting" - this language is not present in the claims. Second, Yasuda's clutch clearly serves to engage the front axle.

On the same page, in the third complete paragraph, it is argued that Yasuda's "clutch does not couple and uncouple the output shafts in a transfer case assembly." It is unclear how Appellant fails to understand that that clutch performs exactly this function, as provided above. And, it is *extremely well-known* to provide a clutch for this exact purpose.

In the last paragraph, and continuing to p10, Appellant attempts to discredit Yasuda further by indicating that "[since] both axles are continuously driven, there is no need for a clutch that couples...the shafts". This statement is clearly erroneous because the reference discloses that the front axle need not be driven, as provided in col 2, lines 58-63; "torque between the front... and rear wheels [range between] 0:100 to 50:50", where "0:100" means that the front axle is not driven. However, this argument is

irrelevant because again, the reference discloses the recited limitations, and is not presented as identical to the present invention.

Therefore, with respect to Claims 15 and 26, Yasuda is maintained to disclose all recited elements.

Re Claim 16 ---

As previously provided, the reference also discloses the controller as automatically activating the clutch in col 2, lines 64-65, during a slip condition only if the speeds of the shafts are within a range, namely, between "0:100 to 50:50"; col 2, lines 60-63.

Re Claims 17-20 and 27-30 ---

As previously provided, the reference distinctly provides either a power source torque, and wheel braking force, to bring the speeds of the shafts within a common range; col 3, lines 28-33. Yasuda also provides the control of both power source torque and braking force in col 1, lines 14-20, as discussed above; "reducing the output power of the engine along with operating the brake". In the latter, the reference provides the controller as "simultaneously control[ling] both power source output torque and wheel braking force to bring [the] speeds of...the shafts within the common range".

Yasuda continues by providing that the convergence occurs prior to activation of the clutch in col 3, lines 48-52; traction control (i.e., convergence of shaft speeds) is performed before torque-splitting (i.e., activation of clutch to couple the shafts).

Re Claims 21 and 31 ---

As previously provided, Yasuda discloses the controller disengaging the shafts when there is no slip; col 3, lines 48-52, provides activation of the clutch when there is slip. *Therefore*, if there is no slip, the clutch is not activated.

Appellant's remarks include (again) inaccurately describing Yasuda's invention – "both front and rear axles are continuously engaged", this issue addressed in the rebuttal with respect to Claims 15 and 26 above. Arguments continue to mischaracterize Yasuda's invention; "the clutch 31 does not include any type of coupling mechanism that couples two transfer case shafts together during a wheel slip condition". It is unclear how Appellant can continue to fail to recognize the function of Yasuda's clutch – for coupling the two shafts, again, *as is extremely well-known in the art.*

Re Claim 23 ---

As previously provided, the reference discloses the clutch as selectively coupling the shafts, i.e., when there is a slip condition. Appellant's remarks are again repetitious and inaccurate, and are addressed by Examiner's respective remarks above.

Re Claims 34 and 35 ---

As JUST discussed, Yasuda provides the shafts as coupled only when there is a slip condition. Again, Appellant's arguments are repetitious and inaccurate.

B. Response to Argument re 103 Rejection

Claim 24 is rejected under 35 USC 103a employing admitted prior art - Leitner 5335764.

As provided above, Leitner, in figure 1, teaches a well-known transfer case including three gears coupled as claimed. It would have been obvious to employ this arrangement because of its availability and very well-known suitability for transmission of drive power in this type of application.

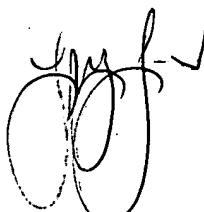
Appellant argues that the Examiner has not provided the evidence requested for Official Notice. However, this is incorrect because the Examiner specifically referred Appellant to this reference, as provided by the Appellant in the IDS filed 9/18/03. Thus, no other "evidence" is necessary.

(11) Conclusion

For the above reasons, it is believed that the rejections should be sustained.

Appeals Conference conducted with LM, AB and LL-V on 9/22/05.

Respectfully submitted,
Ms. Lee Lum-Vannucci
Examiner
10/17/05




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